
वस्त्रादि — नायलॉन के मोज़े — विशिष्टि
(दूसरा पुनरीक्षण)

**Textiles — Socks, Nylon —
Specification**
(Second Revision)

ICS 59.060.10, 59.080.30

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Price Group 6

FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Hosiery Sectional Committee had been approved by the Textile Division Council.

Socks are a piece of clothing worn to protect the feet, keep them clean and warm. Socks can vary in manufacturing materials, this standard focuses on socks particularly made from nylon.

This standard, first published in 1969, and subsequently revised in 1990. This revision has been made in the light of experience gained since its publication and to incorporate the following major changes:

- a) Title of the standard has been modified;
- b) References to Indian Standard given in Annex A has been updated; and
- c) BIS certification marking clause has been updated.

The composition of the committee responsible for the formulation of this standard is listed in Annex B.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***TEXTILES — SOCKS, NYLON — SPECIFICATION***(Second Revision)***1 SCOPE**

1.1 This standard prescribes the requirements for seamless socks knitted in plain, rib or fancy stitches from multifilament stretched nylon yarn.

1.2 This standard does not prescribe the design, colour combination, general appearance, feel and lustre of the socks nor does it specify their degree of whiteness or shade.

2 REFERENCES

The standards listed in Annex A contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed in Annex A.

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 3596 shall apply.

4 TYPES

4.1 Depending upon the pattern of stitches, the socks shall be of any one of the following three types:

a) Plain-knitted socks;

b) Rib-knitted socks; and

c) Fancy-knitted socks

4.1.1 In case of rib and fancy-knitted socks, the particular pattern of stitches shall be as agreed to between the buyer and the manufacturer.

5 YARN**5.1 Nylon Stretch Yarn**

Multifilament stretch nylon-yarn used in knitting, linking and splicing the socks shall conform to the requirements given in Table 1.

5.1.1 Elastic Yarn

Elastic yarn or covered rubber thread having an elongation not less than 450 percent shall be used for laying-in the top portion of the socks.

5.2 Socks

The socks shall be knitted on circular knitting machines. The top of the socks shall be knitted in rib or plain stitches with covered rubber thread or any other suitable elastic thread laid in; and the leg and instep in plain, rib or fancy stitches depending upon the type of the socks (*see 4.1 and Fig. 1*).

NOTE — Particulars of knitting machines are given in Table 2 for information.

Table 1 Requirements of Nylon Yarn
(Clause 5.1)

Sl No.	Characteristics	Requirements	Method of Test
(1)	(2)	(3)	(4)
i)	Tenacity, g/tex (g/d)	32 to 45 (3.5 to 5.0)	IS 1670
ii)	Elongation at break	25 to 30 percent	
iii)	Colour fastness to:		IS/ISO 105-B01 or
	a) Light, Change in colour	4 or better	IS/ISO 105-B02
	b) Washing: Test A (1):		IS/ISO 105-C10
	i) Change in colour	4 or better	
	ii) Staining of adjacent fabric	4 or better	
	c) Perspiration:		IS/ISO 105-E04
	i) Change in colour	4 or better	
	ii) Staining of adjacent fabric	4 or better	
	d) Rubbing:		IS/ISO 105-X12
	i) Color change (Dry)	4 or better	
	ii) Color change (Wet)	4 or better	

Table 2 Particulars of Knitting Machines
[Clause 5.2 (Note)]

Sl No.	Size of Socks	Diameter of Machine mm	Total Number of Needles for Approximate Gauge of Machines (see Note)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)			12 to 14	15	16	18
ii)	Children	70	120	132	140	158
iii)	Ladies	83	144	156	164	186
iv)	Gents	89	156	168	176	200
		95	168	180	188	216
		102	176	192	200	228
v)	Recommended linear density of yarn in denier		2/111 or 2/112			

NOTE — Gauge of machine = number of needles in 25.4 mm (1 inch) of circumference.

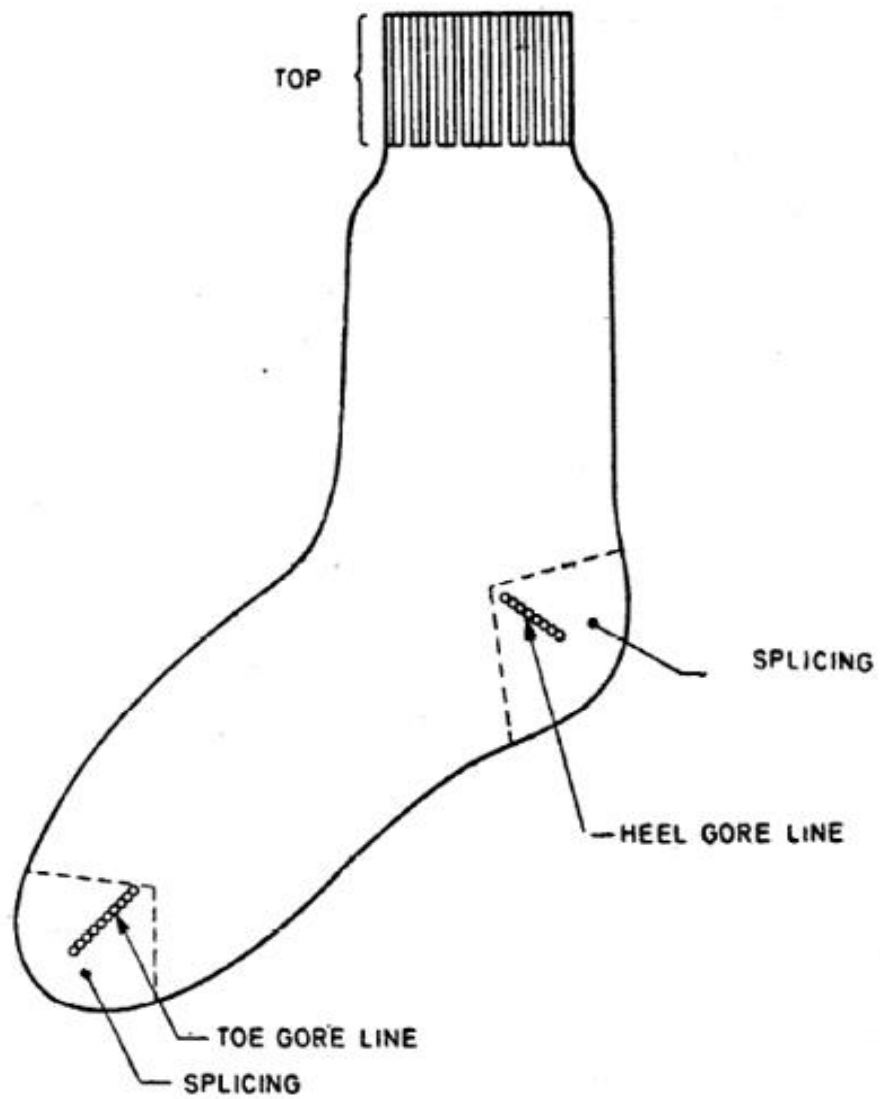


FIG 1 SOCK

5.2.1 The heel, sole and toe portions of the socks should be knitted in plain stitches with splicing. The splicing should be uniform throughout and the spliced portion free from creases or folds.

5.2.2 The socks shall be securely linked at the toe. The linking shall be elastic, smooth and free from knots. Linking shall not give way when the socks are stretched to the full extent of stretch ability of the socks.

6 SPECIFIC REQUIREMENTS

6.1 Size

The nylon socks shall generally be of three sizes, namely, gents, ladies and children.

6.1.1 Depending upon the age, the size of nylon socks for children may be further divided into 5 different sizes, namely 1, 2, 3, 4 and 5.

6.2 Weight

The weight of socks of various sizes shall be as given in Table 3.

Table 3 Minimum Weight Per Ten Pairs of Socks
(Clause 6.2)

Sl No.	Size	Single cylinder product			Double cylinder product with Reinforced Heel and Toe, g
		Plain Socks with single Heel and Toe, g	Plain Socks with Reinforce Heel and Toe, g	Fancy Socks with Reinforced Heel and Hoe, g	
(1)	(2)	(3)	(4)	(5)	(6)
i)	Gents	225	250	250	280
ii)	Ladies	172	195	195	210
iii)	Children				
iv)	1	90	110	110	—
v)	2	103	125	125	—
vi)	3	120	140	140	—
vii)	4	135	155	155	—
viii)	5	150	170	170	—

10 SAMPLING**10.1 Lot**

In any consignment, all the pairs of socks of the same type and size shall be grouped together to constitute a lot.

10.1.1 The conformity of the lot to the requirements

of this specification shall be determined on the basis of tests carried out on the samples selected from Table 4.

10.2 Unless otherwise agreed to between the buyer and the seller, the number of pairs of socks, depending upon the size of the lot, shall be selected at random in accordance with col 1 (3) of Table 4.

Table 4 Number of Pairs of Socks to be selected from a Lot and Permissible Number of Non-conforming Pairs of Socks
(Clause 10.1.1)

Sl No.	No. of Pairs of Socks in the Lot	Gross Sample Size		Sub-Sample Size	
		No. of pair of Socks to be Inspected	Permissible Number of Non- Conforming Pairs of Socks	No. of Pairs of Socks to be Inspected	Permissible Number of Non- Conforming Pairs of Socks
(1)	(2)	(3)	(4)	(5)	(6)
i)	Under to 50	10	1	2	0
ii)	51 to 100	20	2	2	0
iii)	101 to 200	30	3	2	0
iv)	201 to 300	40	3	3	0
v)	301 to 500	50	4	5	0
vi)	501 to 800	70	6	7	1
vii)	801 to 1 300	110	8	10	1
viii)	1 301 to 3 200	150	10	15	2
ix)	3 201 and above	220	14	30	3

10.3 The number of tests and criteria for conformity for each of the characteristics shall be as follows:

<i>Sl No.</i>	<i>Characteristics</i>	<i>Number of Tests</i>	<i>Criterion for Conformity</i>
i)	Freedom from defects	See col (3) of Table 4	Non-conforming pairs not to exceed the corresponding number given in col (4) of Table 4
ii)	Weight	Equal to the number of sets of 10 pairs of socks from the socks selected according to col (3) of Table 4	Each observed value satisfies the relevant requirement
iii)	Tenacity, elongation at break and colour fastness to various agencies except light	One from each pair selected according to col (5) of Table 4	Non-conforming pairs not to exceed the corresponding number given in col (6) of Table 4
iv)	Colour fastness to light	One test specimen up to 500 pairs and two above that	Each observed value satisfies the specified requirements

ANNEX A

(Clause 2)

LIST OF REFERRED STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
IS 1670 : 1991	Textiles — Yarn — Determination of breaking load and elongation at break of single strand (second revision)	IS/ISO 105-C10 : 2006	Textiles — Tests for colour fastness: Part C10 Colour fastness to washing with soap or soap and soda
IS 3596 : 1967	Glossary of terms relating to hosiery	IS/ISO 105-E04 : 2013	Method for determination of colour fastness of textile materials to perspiration (<i>first revision</i>)
IS/ISO 105-B01 : 2014	Textiles — Tests for colour fastness: Part B01 Colour fastness to light: Daylight	IS/ISO 105-X12 : 2016	Textiles — Tests for colour fastness: Part X12 Colour fastness to rubbing (<i>first revision</i>)
IS/ISO 105-B02 : 2014	Textiles — Tests for colour fastness: Part B02 Colour fastness to artificial light: Xenon arc fading lamp test		

ANNEX B
(Foreword)

COMMITTEE COMPOSITION
Hosiery Sectional Committee, TXD 10

<i>Organization</i>	<i>Representative(s)</i>
The South India Textile Research Association, Coimbatore	DR PRAKASH VASUDEVAN (<i>Chairperson</i>)
Apparel Export Promotion Council, Gurugram	SHRI K. S. BISHT
Central Reserve Police Force, New Delhi	SHRI SANJEEV KUMAR SINGH SHRI RANDHIR KUMAR JHA (<i>Alternate</i>)
DKTE Centre of Excellence in Nonwovens, Ichalkaranji, Maharashtra	PROF UDAY J. PATIL SHRI ANIL U. USAWARE (<i>Alternate</i>)
Defence Materials and Stores Research and Development Establishment, Kanpur	SHRI ASHOK KUMAR YADAV
Directorate General of Quality Assurance, Ministry of Defence, New Delhi	SHRI ARVIND KAMTHANE SHRI J. K. YADAV (<i>Alternate</i>)
Essa Garments Private Limited, Tiruppur	SHRI DURGADEVI
JKR Garments, Tirupur	SHRI JAILANI
Knitwear & Apparel Manufacturers Association, Ludhiana	SHRI SUDARSHAN KUMAR JAIN SHRI ARUN AGGARWAL (<i>Alternate</i>)
NIFT-TEA College of Knitwear Fashion, Tirupur	DR K. P. BALAKRISHNAN DR P. P. BALAKRISHNAN (<i>Alternate</i>)
National Institute of Fashion Technology, New Delhi	PROF ASHOK PRASAD PROF AMRITA ROY (<i>Alternate</i>)
Office of Development Commissioner (SSI), New Delhi	SHRI KULDEEP SINGH SHRI S. SURESH BABUJI (<i>Alternate</i>)
Office of the Textile Commissioner, Mumbai	SHRI HUMAYUN K. SHRI SATISH KUMAR N. (<i>Alternate</i>)
SGS India Private Limited, Mumbai	DR KARTHIKEYAN K. SHRI MICHEL FRANCIS (<i>Alternate</i>)
South Indian Hosiery Manufactures Association, Tiruppur	SHRI M. TYAGRAJAN SHRI R. BALASARAVANAN (<i>Alternate</i>)
Textiles Committee, Mumbai	SHRI R. CHANDRAN SHRI J. PARAMESWARAN (<i>Alternate</i>)
The Southern India Mills Association, Coimbatore	DR K. SELVARAJU D. SURESH ANAND KUMAR (<i>Alternate</i>)
The Synthetic and Rayon Textiles Export Promotion Council, Mumbai	SHRI ANIL RAJVANSHI SHRI BHADRESH M. DHODIA (<i>Alternate</i>)
Tiruppur Exporters Association, Tiruppur	SHRI T. R. VIJAYKUMAR
Veermata Jijabai Technological Institute, Mumbai	SHRI S. P. BORKAR DR ARVIND BHONGADE (<i>Alternate</i>)

<i>Organization</i>	<i>Representative(s)</i>
Wool Research Association, Thane	DR MRINAL CHOUDHARI SHRI MAYUR BASUK (<i>Alternate</i>)
BIS Directorate General	SHRI J. K. GUPTA, SCIENTIST 'E'/DIRECTOR AND HEAD (TEXTILES) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]
<i>Member Secretary</i> SHRI TANISHQ AWASTHI SCIENTIST 'B'/ASISTANT DIRECTOR (TEXTILES), BIS	

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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